SYNOPSIS

"Biochemical alterations of fresh water fish *Oreochromis mossambicus* during exposure to fruit ripening chemical calcium carbide intoxification from District Nanded"

- **Abstract of proposed work plan/problem :**

Ripening is a final stage of the maturation process in when the fruit changes colour, softens and develops the flavour, texture, and aroma that constitute optimum eating quality.

The presence investigation will conducted the study the effects after the use of unsatisfactory calcium carbide to ripen fruits for domestic markets as well as their toxic effects on fresh water fish *Oreochromis mossambicus* and ultimately on human health.

Calcium carbide one of the most common use ripening agent for fruits use of calcium carbide is being discouraged worldwide, due to associated health hazards. Calcium carbide treatment is extremely hazards because it contains traces of arsenic and phosphorous, and once dissolved in water, it produces acetylene gas.

1. Introduction:

The man can used natural resources as water,crops,vegetables and fruits because of its natural status in those days all product where pure and with high nutritional value. The content of such nutritious food was naturally acted as an ayurvedic medicinal value to human being and all other animals. But due to man selfishness, the world being change from natural status to polluted one due to heavy industrialization, urbanization and excess use of pesticides on crops and fruits all is being polluted severely The pollution is reaches to its extremities and resulted in various types severe impacts human being and other animals including aquatic biota.

The severe impact leads to so many abnormalities, and diseases like abdominal discomfort, genetic abnormalities, respiratory diseases and various types of carcinogenic activities in animal body, fruits and vegetables are major sources of various type of nutrients and vitamins to human being and all other animals but due to population explosion and excess demands of such a materials, human being damaging these materials with various types of sticks to earn more and easy money.

The fruits requires some period for their natural ripening but people are not waiting the period and they are using various types of harmful and dangerous chemicals for ripening the fruits within very short time and they can sale the fruit by the way fruit merchants puts the human life in to danger.

Hence, the present work under taken to increase the awareness in human population and to save the lives.

2.Review of literature and development in the subject:

It is the recent area of investigation which is of direct concern with hygienic status of human population to date less attention has been given to this burning problem hence it has been selected for present investigation, some researchers has contributed their work and put on light on the severity and importance.

Mohhamad Asif (2012) has studied physico-chemical properties and toxic effects of fruits ripening agent calcium carbide, some other researchers supported the impact of various fruits ripening chemicals, Padmini S. Prabha (1997),Nair S. Singh Z(2003),Anwar R. et al,(2008).

3. Objectives of Research/Proposed Hypothesis:

1. Study of experimental fresh water fish *Oreochromis mossambicus* .

2. Study of toxicity evaluation of calcium carbide on *Oreochromis mossambicus* .

3.Study of calcium carbide on fruit ripening process with respective banana,mango,tomato and citrus.

4. Study of respiratory metabolism under influence of calcium carbide leads to total respiration and rate of respiration.

5. Study of estimation of biochemical alterations in various tissues such as muscles, gills and liver of the experimental and control sets.

6. Study of histopathological changes due to effect of calcium carbide in different tissues of fresh water fish *Oreochromis mossambicus* such as stomach, liver, intestine and kidney.

4. Methodology to be adopted:

The fresh water fishes *Oreochromis mossambicus* where collected from river Godavari through the local fisherman. The fishes where brought to the laboratory and kept in glass aquarium. They will be acclimatized for one weak or seven days and later on will be used for experimentation toxicity, evaluation will be studied with determination of LC_{50} values by using calcium carbide as a toxicant.

The respiratory metabolism will be studies by modified Wrinklers method (1949) total glycogen will be estimated Anthrone method (1951) the proteins will be estimated by Lorry et al (1951) the total amino acids will be estimated by Noori and stein(1948) histopathological studies will be carried out with double staining technique.

5. Importance of study/society application :

The man was using all natural resources such as water,crops,vegetables and fruits, because of its natural status, all these contains were pure and with nutritious value but due to man's selfishness. Population explosion, urbanization, and excess use of pesticides and fertilizers the world get polluted severally.

The fruits require some period for ripening but people are not waiting and they are using various types of harmful and dangerous chemicals for ripening the fruits within very short time. Such a type of fruits ripening chemical are available throughout the world. But some countries have seriously banned such a type of chemicals and its use legally stopped in their countries, which does not happen easily in our country.

Hence, in presence investigation there will be study on biochemical alterations of fresh water fish *Oreochromis mossambicus* during exposure to fruit ripening chemical calcium carbide intoxication.

The study will be helpful to aware the people from use of such a type of fruits from market.

6. Proposed work plan/ formulation and Structure of study

Year wise plan of present work as follows:

- **First Year :**

- Collection of literature and references from various sources.
- In details study of experimental animal, fresh water fish *Oreochromis mossambicus*.
- Study of toxicity evaluation of calcium carbide on *Oreochromis mossambicus.*
- Study of calcium carbide on fruit ripening process with respect to bananas,tomato,mango and citrus.

- **Second Year :**

- Estimation of biochemical alteration such as protein, glycogen, amino acid and lipids.
- Study of respiratory metabolism under influence of calcium carbide.

- **Third Year :**

- Study of histopathology under influence of calcium carbide with control sets.
- Comparative photography and its explanation.

Signature ***Signature***

Research Scholar ***Research Supervisor***

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